WE CLAIM:

1. A method of treatment and/or prevention of an infectious disease in an animal, which comprises the steps of:

a) producing a recombinant DNA expression system comprising at least a DNA sequence encoding for a therapeutic protein, peptide or antisense RNA operably linked to a promoter capable of directing the *in vivo* expression of said DNA sequence of a therapeutically effective amount of said protein, peptide or antisense RNA; and

b) introducing into the animal the DNA expression system of step a) for expression of said therapeutic protein, peptide or antisense RNA.

2. The method of claim 1, wherein said treatment and/or prevention of the disease is effected *in situ* and said DNA expression system is introduced in targeted tissue.

3. The method of claim 1, wherein said DNA expression system is transgenic recombinant animal cells.

4. The method of claim 3, wherein said cells are selected from the group consisting of epithelial mammary gland cells, blood cells, lymphocytes, leukocytes, T-lymphocytes, B-lymphocytes, erythrocytes, muscle cells, hepatic cells, kidney cells, lung cells, secretory cells and non-secretory cells.

5. The method of claim 3, wherein said DNA expression system is selected from the group consisting of a lipidic liposome, a cationic liposome, an anionic liposome.

6. The method of claims 1, 2, 3, 4 or 5, wherein said DNA sequence and said promoter are inserted into an expression vector.

7. The method of claim 6, wherein said vector is a viral vector or a retroviral vector.

8. The method of claims 1, 2, 3, 4, 5, 6 or 7, wherein said infectious diseases are caused by bacteria, virus, retrovirus, parasite, fungi, mold, yeast, prions or scrapies.

9. The method of claim 8, wherein said therapeutic protein, peptide or antisense RNA are selected from the group consisting of bacteriocins, lanthionins, lactoferrin, lysosyme.

10. The method of claim 9, wherein said bacteriocins and/or lanthionins are ambicins, defensins, cecropins, thionins, mellitins, magainins, attacines, diphterins, saponins, cacrutins, xenopins, subtilins, epidermins, pep5, lacticin 481, ancovenins, duramycins, gallidermins or cinnamycins.

11. The method of claim 8, wherein said therapeutic protein, peptide or antisense RNA is selected from the group consisting of immunoglobulins, lactoglobulins, α -lactalbumin, bile-salt-stimulated lipase or ribosyme, cytokines, chemokines, growth factors, immunomodulators and major histocompatibility complex (MHC) proteins.

12. The method of claim 3, which further comprises a 5' and 3' expression regulation DNA sequence and a secretory DNA sequence functional in said animal cells

and operably linked to the recombinant DNA encoding said therapeutic protein, peptide or antisense RNA.

13. A non-human transgenic animal for the production of a recombinant protein, peptide or antisense RNA systemically or in targeted tissue, which comprises at least an expression regulation DNA sequence and a secretory DNA sequence encoding a secretory signal sequence operatively linked to a DNA sequence encoding said protein, peptide or antisense RNA for systemic expression or for expression in targeted tissue cells of said animal.

14. The non-human transgenic animal of claim 13, wherein said expression regulation DNA sequence is selected from the group consisting of a constitutive promoter, an inducible promoter, a cytomegalo virus promoter.

15. The non-human transgenic animal of claim 14 wherein said promoter is selected from the group of DNA sequences encoding lactoferrin, serum albumin, αS1-casein, αS2-casein, β-casein, κ-casein, α-lactalbumin, whey acidic protein, β-lactoglobulin, cytokines, chemokines and growth factors.

16. The non-human transgenic animal of claim 13, wherein said secretory signal sequence is selected from the group consisting of DNA sequences encoding lactoferrin, serum albumin, αS1-casein, αS2-casein, β-casein, κ-casein, α-lactalbumin, β-lactoglobulin, cytokines, chemokines or growth factors.

17. The non-human transgenic animal of claim 13, wherein the expression regulation and secretory signal

sequences are from human, bovine, caprine, ovine, feline, canine, lagomorphes, birds and fishes.

18. The non-human transgenic animal of claim 13, wherein the promoter is tissue-specific for expression in targeted tissue.